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27630	7590	04/07/2004	EXAMINER	
SD3, LLC 22409 S.W. NEWLAND ROAD WILSONVILLE, OR 97070			ASHLEY, BOYER DOLINGER	
			ART UNIT	PAPER NUMBER
			3724	

DATE MAILED: 04/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/929,240

Applicant(s)

GASS ET AL.

Examiner

Boyer D. Ashley

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 January 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) 1,3-8,14,16-21,25-29 and 34 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2,9-13,15,22-24 and 30-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2 5- 7 10 13 14 15.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

It should be noted that for the purpose of this office action the below rejections under 35 U.S.C. 101 (double patenting) are being made under the assumption that the applications were not commonly owned at the time of applicant's invention. It should further be noted that rejections under 35 U.S.C 102(a) and 102(e) using the same U.S. Patent Applications/Publications have not been made because they do not qualify as prior art as their filing dates are not before the filing date of the instant application.

Additionally, it should be noted that the below double patenting rejections are based upon known and available co-pending applications and although it is believed that all appropriate rejections have been made, Applicant's help in determining all appropriate double patenting rejections with all of Applicant's applications is requested because of the large number of similar applications.

Election/Restrictions

1. Applicant's election of Group I and B, claims 2, 9-13, 15, 22-24, 30-33, in Paper No. 12 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).
2. Claims 1, 3-8, 14, 16-21, 25-29, and 34 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 12.

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Priority

3. Acknowledgment is made of applicant's claim for priority under 35 U.S.C. 119(e) and 35 U.S.C. 120. See 37 CFR 1.78.

SPECIAL CIRCUMSTANCES OF THIS APPLICATION:

4. Even if a copending application is listed as a parent to the instant application and material information is technically of record in one or more parent applications, the unusually large number of applicant's cases in varying stages of the examination process might result in one or more parent applications not being readily available for review, or material information of record not being readily apparent. Applicant should point out such material information to the examiner of the instant application if the criteria for materiality applies, and if the examination record provides applicant reason to believe such information has not been considered by the examiner.

If, to the best of applicant's knowledge, applicant has no previous patent or copending application, which would meet the definition of "material," applicant is requested to make a statement of that fact of record.

Any parent application labeled as a CIP or Divisional is assumed to claim a patentably distinct invention from the claims of this application and therefore the issue of double patenting has not been considered and the rights to priority are limited to the common disclosed subject matter unless it is brought to the examiners attention that some claims are not distinct.

37 CFR 1.56 is cited here:

37 CFR 1.56. Duty to disclose information material to patentability.

(b) Under this section, information is material to patentability when it is not cumulative to information already of record or being made of record in the application, and

- (1) It establishes, by itself or in combination with other information, a prima facie case of unpatentability of a claim; or
- (2) It refutes, or is inconsistent with, a position the applicant takes in:
 - (i) Opposing an argument of unpatentability relied on by the Office, or
 - (ii) Asserting an argument of patentability.

A prima facie case of unpatentability is established when the information compels a conclusion that a claim is unpatentable under the preponderance of evidence, burden-of-proof standard, giving each term in the claim its broadest reasonable construction consistent with the specification, and before any consideration is given to evidence which may be submitted in an attempt to establish a contrary conclusion of patentability.

Claims/Specification Objections

5. Claims 2, 9, 10-12, and 30-31 and the specification are objected to because of the use of the English system of measurements. In order to minimize the necessity in the future for converting dimensions given in the English system of measurements to the metric system of measurements when using printed patents as research and prior art search documents, all patent applicants should use the metric (S.I.) units followed by the equivalent English units in parenthesis when describing their inventions in the specifications and claims of patent applications. The initials S.I. stand for "Le Système International d' Unités," the French name for the International System of Units, a modernized metric system adopted in 1960 by the International General Conference of Weights and Measures based on precise unit measurements made possible by modern technology. See for example, MPEP 608.01. Appropriate correction is required.

Double Patenting

6. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

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Effective January 1, 1994, a registered attorney, or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

7. Claims 2 and 22-23 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-2 and 8-11 of copending Application No. 10/052,274 (U.S. Patent Application Publication 2002/0059854). Although the conflicting claims are not identical, they are not patentably distinct from each other because they differ only in claim terminology but encompass the same subject matter.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

8. Claims 22-23 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 3-5, 8, and 11-16 of copending Application No. 09/929,227 (U.S. Patent Application Publication 2002/0020271). Although the conflicting claims are not identical, they are not patentably distinct from each other because they differ only in claim terminology but encompass the same subject matter.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

9. Claims 2 and 22-23 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 and 3-9 of copending Application No. 09/929,236 (U.S. Patent Application Publication 2002/0020261). Although the conflicting claims are not identical, they are not

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patentably distinct from each other because they differ only in claim terminology but encompass the same subject matter.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

10. Claims 2 and 22-23 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 and 5-14 of copending Application No. 09/929,237 (U.S. Patent Application Publication 2002/0020262). Although the conflicting claims are not identical, they are not patentably distinct from each other because they differ only in claim terminology but encompass the same subject matter.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

11. Claims 22-23 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 5-6, 8, and 22-26 of copending Application No. 09/929,241 (U.S. Patent Application Publication 2002/0017180). Although the conflicting claims are not identical, they are not patentably distinct from each other because they differ only in claim terminology but encompass the same subject matter.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

12. Claims 2 and 22-23 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-20

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of copending Application No. 10/202,928 (U.S. Patent Application Publication 2003/0019341). Although the conflicting claims are not identical, they are not patentably distinct from each other because they differ only in claim terminology but encompass the same subject matter.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

13. Claims 2 and 22-23 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-20 of copending Application No. 10/146,527 (U.S. Patent Application Publication 2002/0170400). Although the conflicting claims are not identical, they are not patentably distinct from each other because they differ only in claim terminology but encompass the same subject matter.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

14. Claims 22-23 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-20 of copending Application No. 10/189,027 (U.S. Patent Application Publication 2003/0005588). Although the conflicting claims are not identical, they are not patentably distinct from each other because they differ only in claim terminology but encompass the same subject matter.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Comments on Commonly Assigned Applications

15. Claims 2, 9-13, 15, 22-24, and 30-33 are directed to an invention not patentably distinct from the claims; see above, of commonly assigned applications, for the reasons stated above.

The U.S. Patent and Trademark Office normally will not institute an interference between applications or a patent and an application of common ownership (see MPEP § 2302). Commonly assigned applications, discussed above, would form the basis for a rejection of the noted claims under 35 U.S.C. 103(a) if the commonly assigned case qualifies as prior art under 35 U.S.C. 102(f) or (g) and the conflicting inventions were not commonly owned at the time the invention in this application was made. In order for the examiner to resolve this issue, the assignee is required under 35 U.S.C. 103(c) and 37 CFR 1.78(c) to either show that the conflicting inventions were commonly owned at the time the invention in this application was made or to name the prior inventor of the conflicting subject matter. Failure to comply with this requirement will result in a holding of abandonment of the application.

A showing that the inventions were commonly owned at the time the invention in this application was made will preclude a rejection under 35 U.S.C. 103(a) based upon the commonly assigned case as a reference under 35 U.S.C. 102(f) or (g), or 35 U.S.C. 102(e) for applications filed on or after November 29, 1999.

Claim Rejections - 35 USC § 102

16. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(f) he did not himself invent the subject matter sought to be patented.

17. Claims 2, 9-13, 15, 22-24, and 30-33 are rejected under 35 U.S.C. 102(f)

because the applicant did not invent the claimed subject matter.

It is not clear who actually invented the subject matter of claims 2, 9-13, 15, 22-24 and 30-33 because each of the above co-pending applications have different inventive entities. Therefore, it is not clear which portion of the applications where invention by the same inventive entity of the instant application.

Claim Rejections - 35 USC § 102

18. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

19. Claims 30-31 are rejected under 35 U.S.C. 102(b) as being anticipated by Julien et al., U.S. Patent 5,056,426.

Julien et al. discloses the same invention as claimed including, e.g., an electrode system including a first (30) and second (32) electrodes electrically connected to a current source; a fusible member (nitinol wires 18/46) electrically interconnecting the electrodes; an electrical gate (43 or 44 or 45, column 3, lines 30-50) interposed between at least one of the electrodes and the current source to selectively control the flow of current from the current source to the at least one electrode, wherein the fusible

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member carries a tensile load of at least 10,000 psi and/or 100,000 psi. Julien et al. discloses that typical load carrying capacity is in the range of 750 pounds. Julien et al. further discloses that the diameter of the wire controls the speed of actuation and gives examples of 0.010 inches to 0.080 inches. Therefore, Julien et al. inherently discloses a tensile load of at least 100,000 psi because a load of 750 lbs with a wire diameter of 0.07 inches gives tensile load of 194,883 psi.

Claim Rejections - 35 USC § 103

20. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

21. Claim 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Julien et al., U.S. Patent 5,046,426.

Julien et al. discloses the invention substantially as claimed except that the wires are made of nitinol instead of stainless steel or nichrome. However, the examiner takes official notice that nichrome is old and well known in the art for its high tensile strength and temperature stability. Furthermore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use nichrome instead of nitinol in order to provide increased with high tensile strength and temperature stability, because it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice.

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22. Claim 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Julien et al., U.S. Patent 5,046,426, in view of McCormick, U.S. Patent 5,471,888.

Julien et al. discloses the invention substantially as claimed except that the fusible member is spring tempered. However, the examiner takes official notice that it is old and well known in the art to use spring tempered fusible wires because of there increase hardness, as taught for example by McCormick. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to use spring tempered wires in order to provide increased hardness. Furthermore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use spring tempered fusible members in order to provide increased hardness, because it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice.

23. Claims 2, 9-12, and 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lokey, U.S. Patent 3,785,230, or Friemann et al., U.S. Patent 3,858,095, or Yoneda, U.S. Patent 4,117,752, in view of Baur, U.S. Patent 3,695,116.

Lokey, Friemann et al. or Yoneda all discloses similar invention as claimed, including for example, support structures (see elements 15, 18, 21 in Yoneda; see elements 10, 11, 12, 112, 111 in Lokey; 11, 6-9, 10 in Friemann et al.), a cutting tool (14 in Yoneda, 13 or 113 in Lokey, 5 in Friemann et al.), a detection system (see columns 1 and 3, lines 59-65 and 14-25, A in Yoneda; see 15, 16, 18, 20 in Lokey, see column 1, lines 44-55, Cbm, bridge 3, 4 in Friemann et al.) capable of detecting a dangerous

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condition between the cutting tool and a person, a reaction system (see 20 in Yoneda; see 21 and 29 in Lokey; see columns 3 and 4, lines 34-68 and 1-20 in Friemann et al.) adapted to perform a specified action upon detection of the dangerous condition.

The braking systems of Lokey, Friemann et al., and Yoneda are all electromechanical braking systems wherein a braking element is actuated by electromagnetic/solenoid such that the braking element engages the blade or drive of the blade to stop the blade; hence, Lokey, Friemann et al., and Yoneda all lack a fusible member and fuse firing subsystem for actuating the brake. However, Baur discloses that it is old and well known in the art to replace solenoids and electromagnetic switches with spring loaded actuators with firing subsystems that are electrically responsive by tensioned wires for the purpose of providing fast acting, less expensive, and smaller devices that provide large mechanical forces. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to replace the electromagnetic/solenoid actuators of Lokey, Friemann et al., and Yoneda with spring loaded actuators with firing subsystems, as taught by Baur, in order to create less expensive, smaller and fast acting braking systems.

As to claim 9, the modified devices of Lokey, Friemann et al. and Yoneda all disclose at least two spaced-apart electrodes (26 or 36 or 34), where at least a portion of the fusible member is positioned to contact and extend between the electrodes (see Figures 1-3). It should be noted that there is no specific definition of "electrode", and is typically defined as solid electrical conductor through which current passes.

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As to claim 10, the modified devices of Lokey, Friemann et al. and Yoneda all disclose the spacing between the electrodes is less than 1.0 inches, see column 4, lines 20-30, wherein it is stated that the outside diameter of the housing 10 is 0.5 inches, wherein the distance between elements 34 or 26 as shown in Figures 1 and 3 must be less than 1.0 inch.

As to claims 11 and 12, the modified devices of Lokey, Friemann et al. and Yoneda lack the specific spacing between the electrodes being either less than 0.1 inch or 0.05 inches. However, it would have been an obvious matter of design choice to make the modified devices of Lokey, Friemann et al., Yoneda with either electrode spacing of less than 0.1 inch or 0.05 inch for the purpose of making the modified devices of Lokey, Friemann et al, Yoneda as small as possible and as desired, because such a modification would have involved a mere change in the size of a component. A change in size is generally recognized as being within the level of ordinary skill in the art.

24. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lokey, Friemann et al. or Yoneda in view of Baur as applied to claim 1 above, and further in view of Gaiis et al., U.S. Patent 4,589,047.

The modified devices of Lokey, Friemann et al. and Yoneda disclose the invention substantially as claimed except for the circuit board where the electrodes are traces on the circuit board. However, the examiner takes official notice of the use of electrode traces on circuit boards for the purpose of smaller and more compact device as taught e.g. by Gaiis et al. Therefore, it would have been obvious to one of ordinary

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skill in the art at the time of the invention was made to use a circuit board for mounting the actuation device of the modified devices of Friemann et al., Yoneda, and Lokey in order to reduce the overall size of the actuator.

25. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lokey, Friemann et al. or Yoneda in view of Baur as applied to claim 1 above, and further in view of Gaiis et al., U.S. Patent 4,589,047.

The modified devices of Lokey, Friemann et al. and Yoneda disclose the invention substantially as claimed except for the at least one silicon controlled rectifier. However, Gaiis et al. discloses that it is old and well known in the art to use SCR with fusible member actuating devices for the purpose of controlling the flow of current such that triggering of the actuator is facilitated. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to use a SCR with the modified devices of Friemann et al., Yoneda, and Lokey in order to facilitate the triggering of the actuator.

26. Claims 2, 9-13, 15 and 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lokey, U.S. Patent 3,785,230, or Friemann et al., U.S. Patent 3,858,095, or Yoneda, U.S. Patent 4,117,752, in view of Gaiis et al., U.S. Patent 4,589,047.

Lokey, Friemann et al. or Yoneda all discloses similar invention as claimed, including for example, support structures (see elements 15, 18, 21 in Yoneda; see elements 10, 11, 12, 112, 111 in Lokey; 11, 6-9, 10 in Friemann et al.), a cutting tool (14 in Yoneda, 13 or 113 in Lokey, 5 in Friemann et al.), a detection system (see columns 1

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and 3, lines 59-65 and 14-25, A in Yoneda; see 15, 16, 18, 20 in Lokey, see column 1, lines 44-55, Cbm, bridge 3, 4 in Friemann et al.) capable of detecting a dangerous condition between the cutting tool and a person, a reaction system (see 20 in Yoneda; see 21 and 29 in Lokey; see columns 3 and 4, lines 34-68 and 1-20 in Friemann et al.) adapted to perform a specified action upon detection of the dangerous condition.

The braking systems of Lokey, Friemann et al., and Yoneda are all electromechanical braking systems wherein a braking element is actuated by electromagnetic/solenoid such that the braking element engages the blade or drive of the blade to stop the blade; hence, Lokey, Friemann et al., and Yoneda all lack a fusible member and fuse firing subsystem for actuating the brake. However, Gaiis et al. discloses that it is old and well known in the art to use switching devices comprised of spring biased actuators with firing subsystems that are electrically responsive by tensioned wires for the purpose of providing fast acting, less expensive, and smaller devices that provide large mechanical forces. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to replace the electromagnetic/solenoid actuators of Lokey, Friemann et al., and Yoneda with spring loaded actuators with firing subsystems, as taught by Gaiis et al., in order to create less expensive, smaller and fast acting braking systems.

As to claim 9, the modified devices of Lokey, Friemann et al. and Yoneda all disclose at least two spaced-apart electrodes (see the leads in Figure 6), where at least a portion of the fusible member is positioned to contact and extend between the

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electrodes. It should be noted that there is no specific definition of "electrode", and is typically defined as solid electrical conductor through which current passes.

As to claims 10-12, the modified devices of Lokey, Friemann et al. and Yoneda lack the specific spacing between the electrodes being either less than 1.0 inches or rather 0.1 inch or 0.05 inches. However, it would have been an obvious matter of design choice to make the modified devices of Lokey, Friemann et al., Yoneda with either electrode spacing of less than 1.0 inches or 0.1 inch or 0.05 inch for the purpose of making the modified devices of Lokey, Friemann et al, Yoneda as small as possible and as desired, because such a modification would have involved a mere change in the size of a component. A change in size is generally recognized as being within the level of ordinary skill in the art.

As to claim 13, the modified devices of Lokey, Friemann et al. and Yoneda disclose the invention substantially as claimed including a circuit board (60) where the electrodes are traces on the circuit board.

As to claim 15, the modified devices of Lokey, Friemann et al. and Yoneda disclose the invention substantially as claimed including at least one silicon controlled rectifier (see column 4, lines 12-30).

Conclusion

27. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Boyer D. Ashley whose telephone number is 703-308-1845. The examiner can normally be reached on Monday-Thursday 7:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Allan N. Shoap can be reached on 703-308-1082. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Boyer D. Ashley
Primary Examiner
Art Unit 3724

BDA
April 2, 2004